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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,849	10/01/2004	Andreas Berendes	HM-602PCT	4302

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FRIEDRICH KUEFFNER
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EXAMINER

WOLFE, DEBRA M

ART UNIT	PAPER NUMBER
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3725

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/509,849		BERENDES ET AL.	
	Examiner		Art Unit	
	Debra Wolfe		3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |



DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract is not in the proper format. Correction is required. See MPEP § 608.01(b).

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.



- (1) Field of the Invention.
- (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The disclosure is objected to because of the following informalities: on page 6 line 14 the disclosure states "figure 3..." and on page 6, line 16 the discloses states "figure 4..."

Appropriate correction is required.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 9 and 10. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.



2. The drawings are objected to because figure 1 shows reference numeral 8 (right side of the figure) pointing to the clamp head which should be designated as numeral 18 as in figure 1A and figure 1 shows reference numeral 17A pointing to the connecting arm while in figure 1A the connecting arm is designated with numeral 16. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the



invention. Claim 8 recites the limitation "the clamp heads (18)" in line 2-3. There is insufficient antecedent basis for this limitation in the claim since the claim is dependent upon claim 3.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Mukaigawa et al (U.S Patent # 6,763,565). Mukaigawa et al discloses the method of changing pairs of work rolls (52) and backup rolls (53) for a rolling stand (51) through the use of an apparatus having a linear actuator (54) that moves a pair of work rolls (52) supported on chocks (52a) in a perpendicular direction to the rolling direction for removal or installation. The same linear actuator (pusher 54) also moves a roll changing frame (stool 59), which supports the backup rolls (53), for removal and installation of the backup rolls (53) by first coupling to the work rolls (52) and then moving the work rolls out of the rolling stand (51) and is then uncoupled from the work rolls. The uncoupled linear actuator is then coupled to the roll changing frame (stool 59) and moves the roll changing frame (stool 59) such that it is placed between the backup rolls (53) within the rolling stand (51) and once the backup rolls (53) are supported on the roll changing frame (stool 59) they are moved in or out of the rolling stand (51). The method of Mukaigawa et al has the linear actuator (pusher 51) push the roll changing frame (stool 59) out of the rolling



stand (51) when removing the backup rolls (53) or pull the roll changing frame (stool 59) when installing new backup rolls (53) from the drive side (Ds) of the rolling stand (51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 3-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukaigawa et al (U.S. Patent # 6,763,565). Mukaigawa et al discloses a roll changing apparatus for a rolling stand that houses work rolls (52), which are supported on chocks (52a) and can be moved out by means of a linear actuator (See Col. 8, line 18-19), and backup rolls (53) that can be moved out or in by means of a lower backup roll (53) supported on a track (18) and wheels (14) and by means of a roll changing frame (stool 59) which is supported on the lower backup roll (53) and itself supports the upper backup roll (53). The roll changing apparatus of Mukaigawa et al comprises of a connecting arm (pusher 54) that is coupled to the work rolls (52) on the drive side (Ds) of the rolling stand (51) through the use of a clamp head (connecting fitting 54a) attached to the end of the connecting arm (pusher 54) which is extendedly driven to push out the old work rolls (52), and then uncouples from the work rolls (52) after the work rolls (52) have been withdrawn the required distance therefore allowing the same connecting arm (pusher 54) to couple to a roll changing frame (stool 59), that has been moved between the backup rolls (53), through the use of a shaped part (connecting fitting 59a) attached to the roll



changing frame (stool 59) and the clamp head (connecting fitting 54a) of the connecting arm (pusher 54). Once the upper backup roll (53) and the roll changing frame (stool 59) are supported on the lower backup roll (53) the pair of backup rolls (53) can be moved out or back in by the driven connecting arm (pusher 54). Mukaigawa et al discloses that the connecting arm (pusher 54) is driven to extend linearly [See Col. 8, line 18-20] but does not disclose a hydraulic piston-cylinder actuator. However applicant states on page 1, line 3 of paragraph 2 of the disclosure that it is known to use a piston-cylinder actuator for the removal of work and backup rolls. In addition one of ordinary skill in the art would know that the required drive assembly would have to be hydraulically actuated in order to provide the required force to overcome the weight of the work and backup rolls and remove the work and backup rolls from the rolling stand. Therefore the Examiner takes official notice that, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a hydraulic piston-cylinder actuator to drive the connecting arm (pusher 54) of Mukaigawa et al in order for a fast and efficient removal of the work and backup rolls (52, 53).

With regards to claim 9 Mukaigawa et al does disclose a drive cylinder (12) for raising and lowering an up-and-down rail (58a) in the rolling mill stand (51) [See Col. 7, lines 42-45] and further goes on to state in column 7, lines 58-63 that the roll changing frame (stool 59) rides on the up-and-down rail (58a) which are adjustable. However, Mukaigawa et al further fails to explicitly disclose a hydraulic apparatus. The Examiner takes Official Notice that, it is known by one of ordinary skill in the art that the drive cylinder would have to be a hydraulic cylinder in order to overcome the weight of the roll changing frame (stool 59) and lower and raise the changing frame (stool 59). Therefore, it would have been obvious to one of ordinary skill in the



art at the time the invention was made to modify the drive cylinder of Mukaigawa et al with a hydraulic cylinder in order to lower and raise the roll changing frame (stool 59).

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mukaigawa et al in view of Sherwood (U.S. Patent # 3,583,195). Mukaigawa et al discloses the invention as stated above and further discloses that the upper backup roll (53) is lowered [See FIG 3(c) and Col. 8, lines 37-39] onto the roll changing frame (stool 59) from the rolling stand (51). Mukaigawa et al discloses the invention substantially as claimed but does not disclose the means used for lowering the upper backup roll (53). However Sherwood discloses a roll changing apparatus having a lifting assembly comprising of a hydraulic cylinder (202) [See Col. 6, lines 53-58] that is used to lower the upper backup roll [See Col. 10, lines 34-36]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mukaigawa et al with a lifting assembly comprising of a hydraulic cylinder as taught by Sherwood in order to lower the upper backup roll effectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra Wolfe whose telephone number is (571) 272-1904. The examiner can normally be reached Monday - Thursday 6am - 3:30pm with alternating Friday 6am - 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached at (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Debra Wolfe
Examiner
Art Unit 3725

A handwritten signature in black ink, appearing to read "Derris H. Banks", is positioned above the printed name and title.

DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700